

SNELL MANUFACTURING COMPANY

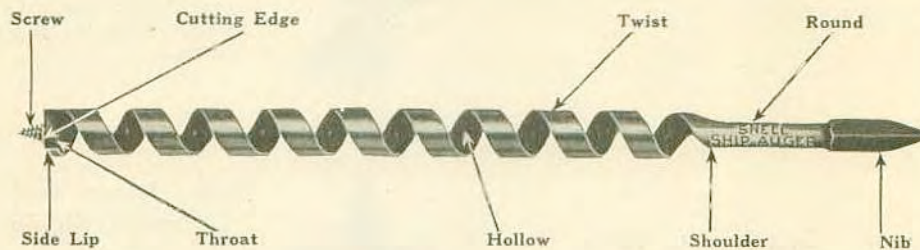
Manufacturers of

**Augers and Bits, Ship Augers, Boring Machines,
Carpenters' Tools, Etc.**

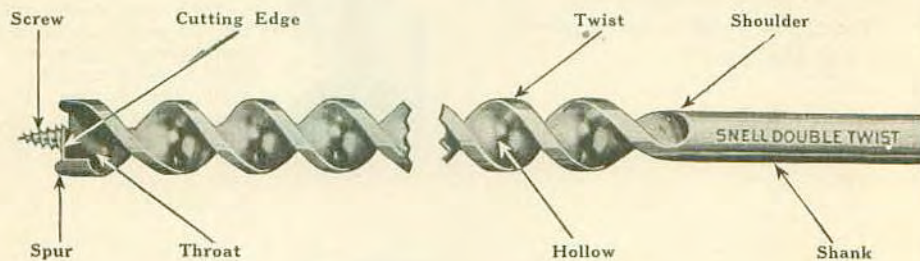
Established 1790

EXPLANATION OF BIT AND AUGER TERMS

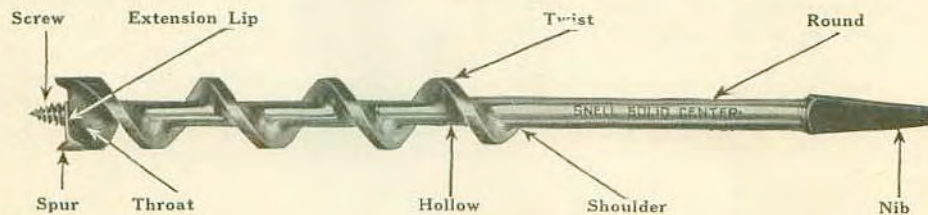
Ship Auger with Screw



Double Twist Machine Bit



Solid Center Auger Bit



The Spur is a sharp projection, which extends down from the cutting edge on some types of bits; its function is to outline the hole in advance of the cutting edge, preparing the chip so that it can be lifted by the cutting edge.

The Side Lip frees the outer edge, while the cutting edge cuts and lifts the chip, leaving the sides of hole perfectly smooth.

On flat head type of bits, the side lip and cutting edge act in unison to cut and lift the chip.

TYPES OF BIT AND AUGER HEADS

As the formation of head has much to do with adaptability for different kinds of boring, the following descriptions of the different heads should be of service in determining the style best suited for the various uses.

**Double Cutter, Double Twist**

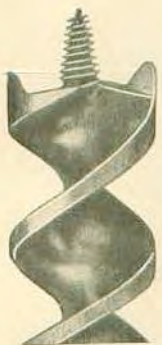
For general boring in all kinds of wood; bores easily, feeds rapidly, clears readily and cuts smoothly.

Has two cutting edges with double spurs and side lips; double thread screw; the best bit for carpenter and cabinet maker.

**Star, Single Twist**

Unequaled for rapid work and boring with the grain; cuts clean and frees chips easily; has single spur, single cutting edge and single thread screw.

For difficult boring in wet, green, very hard or knotty wood.

**Extension Lip, Double Twist**

Bores easily and cuts smooth hole; is adapted for general use and for those who desire particularly smooth, accurate boring as in furniture and cabinet work.

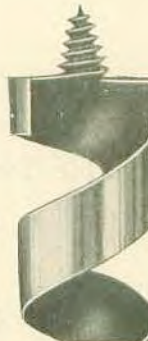
Has two cutting edges, extension lips and double thread screw.

**Solid Center, Extension Lip**

Combines the desirable qualities of strength, free, easy cutting and good chip clearance.

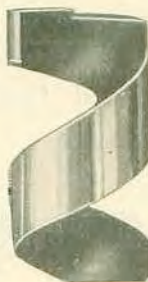
Has two cutting edges with spurs of the extension lip type; pitch of screw and size of spurs properly proportioned so that the bit can do smooth, accurate boring.

3/16 to 10/16 bits have double thread screws, larger sizes have single thread screws; recommended for electrical workers.

**Ship Auger and Bit with Screw, Single Twist**

Designed primarily for ship, car, trestle and heavy construction work and for boring to greater depths; recommended for strength, rigidity and free clearance.

Made with single cutting edge, one side lip and single thread screw. This permits easy cutting and also allows a good body of metal for sharpening and wear; best for use in pneumatic and electric boring machines.

**Ship Auger and Bit Without Screw, Single Twist**

Used largely in deep boring and where it is necessary that hole be perfectly straight; being without point or screw, have little or no tendency to drift with or follow the grain of the wood; unequaled for wet, pitchy woods; also used largely in power boring machines.

Rapidity of Boring

This depends upon pitch of screw and is measured by the number of turns required to bore through one inch of wood; every snell bit and auger is fitted with a pitch of screw that more than a century of experience has taught us is the best type of tool; illustrations above show both single and double thread screws; the single thread for rapid, positive work or when there is a tendency to fill up threads; the double thread for accurate and particularly fine work, as in furniture and cabinet making.

SNELL CLARK EXPANSIVE BITS

These expansive bits are made from special bit steel, the edged portions being carefully tempered and finished, while the screws are milled.

The tools throughout are designed to meet the demand for the highest grade expansive bits and to reflect credit on the brand "Snell," established in 1790, and each year meaning more to the mechanic.



Small Size

With two cutters; one boring from $\frac{1}{2}$ to $\frac{7}{8}$ inch, and the other from $\frac{7}{8}$ to $1\frac{1}{2}$ inches.

No. 1	Small size; weight per dozen, 3 lbs.....	Per Dozen \$18.00
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One dozen in a box

Large Size

With two cutters; one boring from $\frac{7}{8}$ to $1\frac{3}{4}$ inches, and the other from $1\frac{3}{4}$ to 3 inches.

No. 2	Large size; weight per dozen, 6 lbs.....	Per Dozen \$26.00
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One in a carton, six cartons in a box

EXTRA CUTTERS



No. 2



No. 4

No. 1	Boring from $\frac{1}{2}$ to $\frac{7}{8}$ inches; weight per dozen, 1 ounce	Per Dozen \$3.00
No. 2	Boring from $\frac{7}{8}$ to $1\frac{1}{2}$ inches; weight per dozen, 2 ounces	3.75
No. 3	Boring from $\frac{7}{8}$ to $1\frac{3}{4}$ inches; weight per dozen, 12 ounces	5.25
No. 4	Boring from $1\frac{3}{4}$ to 3 inches; weight per dozen, 1 lb.	6.00
No. 5	Boring from 3 to 4 inches; weight per dozen, $1\frac{1}{4}$ lbs.	9.00
No. 6	Boring from 4 to 5 inches; weight per dozen, $1\frac{1}{2}$ lbs.	12.00

EXTRA CAPS

Small caps for No. 1 expansive bits; weight per dozen, 1 ounce	Per Dozen \$1.44
Large caps for No. 2 expansive bits; weight per dozen, 9 ounces	1.80

EXTRA SCREWS

Small size screws for No. 1 expansive bits; weight per dozen, 1 ounce	Per Dozen \$0.60
Large size screws for No. 2 expansive bits; weight per dozen, 4 ounces	.70

SNELL EXTRA AUGER BITS

Double Cutter, Double Twist



No. 200

Forged from crucible steel; full polished, except nib. For general boring in all kinds of wood; bores easily, feeds rapidly, clears readily and cuts smoothly; has two cutting edges with double spurs and side lips; double thread screw; the best bit for carpenter and cabinet maker.

Size Inches, in 16ths.	3	4	5	6	7	8	9	10	11	12
Per Dozen	\$6.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	7.00	7.00
Length Over All, Inches	7½	7½	7¾	7¾	8	8½	8¾	8¾	8½	8¾
Weight Per Dozen, Lbs.	¾	1	1¼	1½	1¾	2	2¼	2½	2¾	3
Dozen in a Box.....	½	½	½	½	½	½	½	½	½	½

Size Inches, in 16ths.	13	14	15	16	17	18	20	22	24
Per Dozen	\$8.25	8.25	9.50	9.50	12.00	12.00	14.00	16.00	18.00
Length Over All, Inches	8¾	8¾	9	9	9½	9½	9½	9½	9½
Weight Per Dozen, Lbs.	3¼	3¾	4¼	4½	4¾	5½	6	6½	8
Dozen in a Box.....	½	½	½	½	½	½	½	½	½

Sets in Paper Boxes

Set No.	Quarters	Number of Bits Per Set	Weight Per Set	Per Set
200 A	11¼	1 each, 4, 5, 6, 8, 10 and 12-16ths.....	1 lb.	\$3.00
200 B	14	1 each, 4, 6, 8, 10, 12 and 16-16ths.....	1¼ lbs.	3.35
200 C	18	1 each, 4, 5, 6, 7, 8, 9, 10, 11 and 12-16ths.....	1¼ lbs.	4.50
200 D	18¾	1 each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths.....	1½ lbs.	4.50
200 E	21	2 each, 4 and 8-16ths and 1 each, 5, 6, 7, 9, 10, 11 and 12-16ths.....	2 lbs.	5.40
200 F	24	2 each, 6, 8 and 10-16ths and 1 each, 4, 5, 7, 9, 11 and 12-16ths.....	2¼ lbs.	5.90
200 G	32½	1 each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths.....	3 lbs.	7.50

SNELL EXTENSION LIP AUGER BITS

Double Twist



No. 300

Forged from crucible steel; full polished, except nib. Bores easily and cuts smooth hole; is adapted for general use and for those who desire particularly smooth, accurate boring as in furniture and cabinet work; has two cutting edges, extension lips and double thread screw.

Size Inches, in 16ths.	3	4	5	6	7	8	9	10	11	12
Per Dozen	\$6.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	7.00	7.00
Length Over All, Inches	7½	7½	7¾	7¾	8	8½	8¾	8¾	8½	8¾
Weight Per Dozen, Lbs.	¾	1	1¼	1½	1¾	2	2¼	2½	2¾	3
Dozen in a Box.....	½	½	½	½	½	½	½	½	½	½

Size Inches, in 16ths.	13	14	15	16	17	18	20	22	24
Per Dozen	\$8.25	8.25	9.50	9.50	12.00	12.00	14.00	16.00	18.00
Length Over All, Inches	8¾	8¾	9	9	9½	9½	9½	9½	9½
Weight Per Dozen, Lbs.	3¼	3¾	4¼	4½	4¾	5½	6	6½	8
Dozen in a Box.....	½	½	½	½	½	½	½	½	½

Sets in Paper Boxes

Set No.	Quarters	Number of Bits Per Set	Weight Per Set	Per Set
300 A	11¼	1 each, 4, 5, 6, 8, 10 and 12-16ths.....	1 lb.	\$3.00
300 B	14	1 each, 4, 6, 8, 10, 12 and 16-16ths.....	1¼ lbs.	3.35
300 C	18	1 each, 4, 5, 6, 7, 8, 9, 10, 11 and 12-16ths.....	1¼ lbs.	4.50
300 D	18¾	1 each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths.....	1½ lbs.	4.50
300 E	21	2 each, 4 and 8-16ths and 1 each, 5, 6, 7, 9, 10, 11 and 12-16ths.....	2 lbs.	5.40
300 F	24	2 each, 6, 8 and 10-16ths and 1 each, 4, 5, 7, 9, 11 and 12-16ths.....	2¼ lbs.	5.90
300 G	32½	1 each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths.....	3 lbs.	7.50

SNELL SOLID CENTER AUGER BITS



No. 800

Forged from crucible steel; full polished, except nib. Superior to any other bit of this type; combines the desirable qualities of strength, free, easy cutting and good chip clearance; has two cutting edges with spurs of the extension lip type.

Size Inches, in 16ths.	3	4	5	6	7	8	9	10	11	12
Per Dozen	\$6.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	7.00	7.00
Length Over All, Inches	7½	7⅝	7¾	7⅞	8	8⅛	8¼	8⅜	8½	8⅝
Weight Per Dozen, Lbs.	¾	1	1¼	1½	1¾	2	2¼	2½	2¾	3
Dozen in a Box.....	½	½	½	½	½	½	½	½	½	½

Size Inches, in 16ths.	13	14	15	16	17	18	20	22	24
Per Dozen	\$8.25	8.25	9.50	9.50	12.00	12.00	14.00	16.00	18.00
Length Over All, Inches	8¾	8⅞	9	9	9⅛	9¼	9½	9½	9½
Weight Per Dozen, Lbs.	3¼	3¾	4¼	4½	4¾	5½	6	6½	8
Dozen in a Box.....	½	½	½	½	½	½	½	½	½

SETS IN PAPER BOXES

Set No.	Quarters	Number of Bits Per Set	Weight Per Set	Per Set
800 A	11¼	1 each, 4, 5, 6, 8, 10 and 12-16ths.....	1 lb.	\$3.00
800 B	14	1 each, 4, 6, 8, 10, 12 and 16-16ths.....	1¼ lb.	3.35
800 C	18	1 each, 4, 5, 6, 7, 8, 9, 10, 11 and 12-16ths.....	1¼ lbs.	4.50
800 D	18¾	1 each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths.....	1½ lbs.	4.50
800 E	21	2 each, 4 and 8-16ths and 1 each, 5, 6, 7, 9, 10, 11 and 12-16ths.....	2 lbs.	5.40
800 F	24	2 each, 6, 8 and 10-16ths and 1 each, 4, 5, 7, 9, 11 and 12-16ths.....	2¼ lbs.	5.90
800 G	32½	1 each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths.....	3 lbs.	7.50

SNELL SOLID CENTER AUGER BITS

For Boring Hard Wood



No. 801

Forged from crucible steel; full polished, except nib. Similar to the No. 800, but made with flat head type; this construction results in fast, positive boring in hard wood, either with or against the grain.

Size Inches, in 16ths.	4	5	6	7	8	9	10	11	12
Per Dozen	\$5.00	5.00	5.00	5.00	5.00	6.00	6.00	7.00	7.00
Length Over All, Inches	7⅝	7¾	7⅞	8	8⅛	8¼	8⅜	8½	8⅝
Weight Per Dozen, Lbs.	1	1¼	1½	1¾	2	2¼	2½	2¾	3
Dozen in a Box.....	½	½	½	½	½	½	½	½	½

Size Inches, in 16ths.	13	14	15	16	17	18	20	22	24
Per Dozen	\$8.25	8.25	9.50	9.50	12.00	12.00	14.00	16.00	18.00
Length Over All, Inches	8¾	8⅞	9	9	9⅛	9¼	9½	9½	9½
Weight Per Dozen, Lbs.	3¼	3¾	4¼	4½	4¾	5½	6	6½	8
Dozen in a Box.....	½	½	½	½	½	½	½	½	½

SNELL SPECIAL PATTERN AUGER BITS

For Boring Hard Wood



No. 201

Forged from crucible steel; full polished, except head and nib. Made with special screw point to bore easily in lignum-vitae or other hard woods, also for end boring; similar to the English Mathieson Bit, and has an extensive export sale; flat cut type and easily sharpened.

Size Inches, in 16ths.	4	5	6	7	8	9	10	11	12
Per Dozen	\$5.00	5.00	5.00	5.00	5.00	6.00	6.00	7.00	7.00
Length Over All, Inches	7 $\frac{7}{8}$	7 $\frac{3}{4}$	7 $\frac{1}{2}$	8	8 $\frac{1}{8}$	8 $\frac{1}{4}$	8 $\frac{3}{8}$	8 $\frac{1}{2}$	8 $\frac{5}{8}$
Weight Per Dozen, Lbs.	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2	2 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{3}{4}$	3
Dozen in a Box.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

Size Inches, in 16ths.	13	14	15	16	17	18	20	22	24
Per Dozen	\$8.25	8.25	9.50	9.50	12.00	12.00	14.00	16.00	18.00
Length Over All, Inches	8 $\frac{3}{4}$	8 $\frac{7}{8}$	9	9	9 $\frac{1}{8}$	9 $\frac{1}{4}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$
Weight Per Dozen, Lbs.	3 $\frac{1}{4}$	3 $\frac{3}{4}$	4 $\frac{1}{4}$	4 $\frac{1}{2}$	4 $\frac{3}{4}$	5 $\frac{1}{2}$	6	6 $\frac{1}{2}$	8
Dozen in a Box.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

SETS IN PAPER BOXES

Set No.	Quarters	Number of Bits Per Set	Weight Per Set	Per Set
201 A	11 $\frac{1}{4}$	1 each, 4, 5, 6, 8, 10 and 12-16ths.....	1 lb.	\$3.00
201 B	14	1 each, 4, 6, 8, 10, 12 and 16-16ths.....	1 $\frac{1}{4}$ lbs.	3.35
201 C	18	1 each, 4, 5, 6, 7, 8, 9, 10, 11 and 12-16ths.....	1 $\frac{1}{4}$ lbs.	4.50
201 D	18 $\frac{3}{4}$	1 each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths.....	1 $\frac{1}{2}$ lbs.	4.50
201 E	21	2 each, 4 and 8-16ths and 1 each, 5, 6, 7, 9, 10, 11 and 12-16ths.....	2 lbs.	5.40
201 F	24	2 each, 6, 8 and 10-16ths and 1 each, 4, 5, 7, 9, 11 and 12-16ths.....	2 $\frac{1}{4}$ lbs.	5.90
201 G	32 $\frac{1}{2}$	1 each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16-16ths.....	3 lbs.	7.50

BATES AUGER BITS



No. 100

A good quality cast steel auger bit, well known as a dependable wood-boring tool. Approximate length of twist, 4 $\frac{1}{2}$ inches; approximate length over all, 8 inches.

Sizes in Millimeters..	5	6, 7, 8	9, 10	11	12, 13	14	15, 16	17	18, 19
Size Inches, in 16ths...	3	4, 5	6	7	8	9	10	11	12
Per Dozen	\$6.00	5.00	5.00	5.00	5.00	6.00	6.00	7.00	7.00
Weight Per Dozen, Lbs.	$\frac{3}{4}$	1, 1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2	2 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{3}{4}$	3
Dozen in a Box.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

Sizes in Millimeters..	20, 21	22	23, 24	25	26, 27	28	30, 31, 32	35	38
Size Inches, in 16ths...	13	14	15	16	17	18	20	22	24
Per Dozen	\$8.25	8.25	9.50	9.50	12.00	12.00	14.00	16.00	18.00
Weight Per Dozen, Lbs.	3 $\frac{1}{4}$	3 $\frac{3}{4}$	4 $\frac{1}{4}$	4 $\frac{1}{2}$	4 $\frac{3}{4}$	5 $\frac{1}{2}$	6	6 $\frac{1}{2}$	8
Dozen in a Box.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

JOHN H. GRAHAM & CO. DIRECT REPRESENTATIVES

SNELL STAR AUGER BITS



No. 600

Forged from crucible steel, full polished.

Easy running single twist bit for general work and for boring in hard wood, unequaled for end boring; has one cutting edge and one spur.

The Best All-Around Bit We Produce.

Size Inches, in 16ths.....	4	5	6	7	8	9	10	11
Per Dozen	\$5.00	5.00	5.00	5.00	5.00	6.00	6.00	7.00
Length Over All, Inches.....	7 $\frac{7}{8}$	7 $\frac{3}{4}$	7 $\frac{7}{8}$	8	8 $\frac{1}{8}$	8 $\frac{1}{4}$	8 $\frac{3}{8}$	8 $\frac{1}{2}$
Weight Per Dozen, Lbs.....	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2 $\frac{1}{4}$	2 $\frac{3}{4}$	3 $\frac{1}{4}$	3 $\frac{3}{4}$
Dozen in a Box.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Size Inches, in 16ths.....	12	13	14	15	16	18	20	
Per Dozen	\$7.00	8.25	8.25	9.50	9.50	12.00	14.00	
Length Over All, Inches.....	8 $\frac{3}{8}$	8 $\frac{3}{4}$	8 $\frac{7}{8}$	9	9	9 $\frac{1}{4}$	9 $\frac{1}{2}$	
Weight Per Dozen, Lbs.....	4 $\frac{1}{2}$	4 $\frac{3}{4}$	5 $\frac{1}{2}$	6	7 $\frac{1}{2}$	9	10	
Dozen in a Box.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	

SETS IN PAPER BOXES.

Set No.	Quarters	Number of Bits Per Set	Weight Per Set	Per Set
600 A	11 $\frac{1}{4}$	1 each, 4, 5, 6, 8, 10 and 12-16ths.....	1 $\frac{1}{4}$ lbs.	\$3.00
600 B	14	1 each, 4, 6, 8, 10, 12 and 16-16ths.....	1 $\frac{1}{2}$ lbs.	3.35
600 C	18	1 each, 4, 5, 6, 7, 8, 9, 10, 11 and 12-16ths.....	1 $\frac{3}{4}$ lbs.	4.50
600 D	18 $\frac{3}{4}$	1 each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths.....	2 lbs.	4.50
600 E	21	2 each, 4 and 8-16ths and 1 each, 5, 6, 7, 9, 10, 11 and 12-16ths.....	2 $\frac{1}{4}$ lbs.	5.40
600 F	24	2 each, 6, 8 and 10-16ths and 1 each, 4, 5, 7, 9, 11 and 12-16ths.....	2 $\frac{3}{4}$ lbs.	5.90
600 G	32 $\frac{1}{2}$	1 each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths.....	3 $\frac{1}{2}$ lbs.	7.50

STANDARD LISTS FOR AUGER BITS IN SETS

Quarters	Paper Boxes Per Set	Fancy Boxes and Rolls Per Set	Assortments Contain the Following Bits
32 $\frac{1}{2}$	\$7.50	\$8.50	One each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths
25 $\frac{1}{2}$	6.00	7.00	One each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14 and 16-16ths
24	5.90	6.90	One each, 4, 5, 7, 9, 11 and 12, and two each, 6, 8 and 10-16ths
22 $\frac{1}{2}$	5.80	6.80	One each, 5, 7, 9, 10, 11 and 12, and two each, 4, 6 and 8-16ths
21	5.40	6.40	One each, 5, 6, 7, 9, 10, 11 and 12, and two each, 4 and 8-16ths
20 $\frac{1}{2}$	4.90	5.90	One each, 4, 5, 6, 7, 8, 10, 12, 14 and 16-16ths
18 $\frac{3}{4}$	4.50	5.50	One each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths
18	4.50	5.50	One each, 4, 5, 6, 7, 8, 9, 10, 11 and 12-16ths
17 $\frac{1}{2}$	4.00	4.75	One each, 4, 6, 8, 10, 12, 14 and 16-16ths
15 $\frac{1}{4}$	3.75	4.50	One each, 4, 5, 6, 8, 10, 12 and 16-16ths
14	3.35	4.10	One each, 4, 6, 8, 10, 12 and 16-16ths.
11 $\frac{1}{4}$	3.00	3.75	One each, 4, 5, 6, 8, 10 and 12-16ths

NOTE.—The above List Prices apply to all types of small auger bits, except ship auger bits.

SNELL STAR ELECTRICIANS' BITS



Nos. 654 and 655

Forged from crucible steel, full polished.

Has one cutting edge and one spur; long coarse screw.

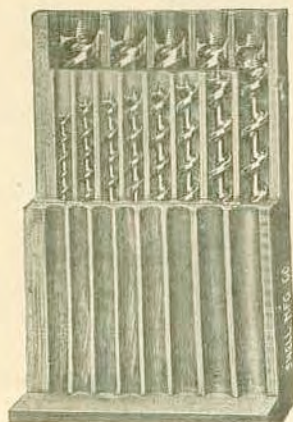
No. 654

Size, 10-16ths—6 Inch Twist, 12 Inch Shank; Length Over All, 18 Inches; Weight Per Dozen, 6 $\frac{5}{8}$ lbs.....	Per Dozen
Size, 11-16ths—6 Inch Twist, 12 Inch Shank; Length Over All, 18 Inches; Weight Per Dozen, 7 $\frac{3}{8}$ lbs.....	\$12.00
Half dozen in a box	14.00

No. 655

Size, 10-16ths—6 Inch Twist, 6 Inch Shank; Length Over All, 12 Inches; Weight Per Dozen, 4 $\frac{1}{2}$ lbs.....	Per Dozen
Size, 11-16ths—6 Inch Twist, 6 Inch Shank; Length Over All, 12 Inches; Weight Per Dozen, 5 lbs.....	\$9.00
Half dozen in a box	10.50

AUGER BIT SETS IN COLUMBIA BOXES



Set of 13 Bits

This style box is used for auger bits in sets as listed below; it can be stood on end or laid flat; made of hard wood, oiled finish, and displays the bits to the best advantage; it is more convenient than other bit boxes.

Stock Assortments

Are specified below, although special assortments will be made up if ordered in sufficient quantity.

SNELL EXTRA AUGER BITS

Set No.	Quarters	Number of Bits Per Set	Weight Per Set	Per Set
211 1/4	11 1/4	1 each, 4, 5, 6, 8, 10 and 12-16ths.....	2 1/2 lbs.	\$3.75
214	14	1 each, 4, 6, 8, 10, 12 and 16-16ths.....	3 lbs.	4.10
218	18	1 each, 4, 5, 6, 7, 8, 9, 10, 11 and 12-16ths	3 1/4 lbs.	5.50
218 3/4	18 3/4	1 each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths	3 1/2 lbs.	5.50
232 1/2	32 1/2	1 each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths.....	5 lbs.	8.50

SNELL EXTENSION LIP AUGER BITS

Set No.	Quarters	Number of Bits Per Set	Weight Per Set	Per Set
311 1/4	11 1/4	1 each, 4, 5, 6, 8, 10 and 12-16ths.....	2 1/2 lbs.	\$3.75
314	14	1 each, 4, 6, 8, 10, 12 and 16-16ths.....	3 lbs.	4.10
318	18	1 each, 4, 5, 6, 7, 8, 9, 10, 11 and 12-16ths	3 1/4 lbs.	5.50
318 3/4	18 3/4	1 each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths	3 1/2 lbs.	5.50
332 1/2	32 1/2	1 each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths.....	5 lbs.	8.50

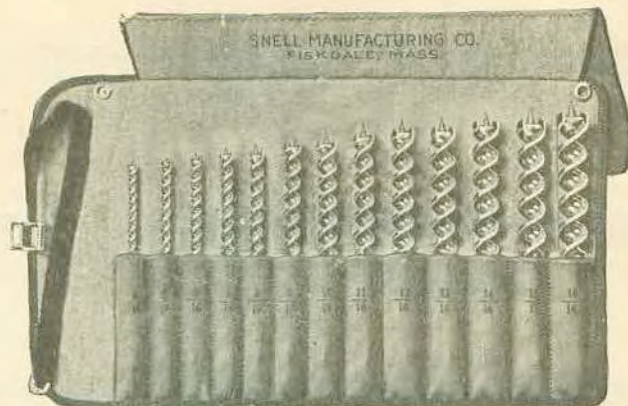
SNELL STAR AUGER BITS

Set No.	Quarters	Number of Bits Per Set	Weight Per Set	Per Set
611 1/4	11 1/4	1 each, 4, 5, 6, 8, 10 and 12-16ths.....	3 lbs.	\$3.75
614	14	1 each, 4, 6, 8, 10, 12 and 16-16ths.....	3 1/2 lbs.	4.10
618	18	1 each, 4, 5, 6, 7, 8, 9, 10, 11 and 12-16ths	3 3/4 lbs.	5.50
618 3/4	18 3/4	1 each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths	4 lbs.	5.50
632 1/2	32 1/2	1 each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths.....	6 lbs.	8.50

SNELL SOLID CENTER AUGER BITS

Set No.	Quarters	Number of Bits Per Set	Weight Per Set	Per Set
811 1/4	11 1/4	1 each, 4, 5, 6, 8, 10 and 12-16ths.....	2 1/2 lbs.	\$3.75
814	14	1 each, 4, 6, 8, 10, 12 and 16-16ths.....	3 lbs.	4.10
818	18	1 each, 4, 5, 6, 7, 8, 9, 10, 11 and 12-16ths	3 1/4 lbs.	5.50
818 3/4	18 3/4	1 each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths	3 1/2 lbs.	5.50
832 1/2	32 1/2	1 each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths.....	5 lbs.	8.50

SNELL AUGER BIT SETS IN CANVAS ROLLS

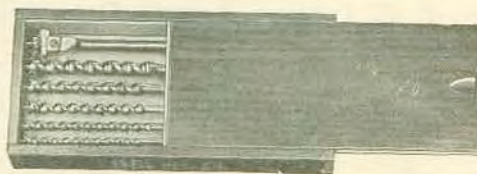


Made of heavy colored canvas with well-sewed, turned-in edges; lined with canton flannel and sewed to give a separate compartment for each bit, affording a simple and convenient means of protecting the bits from dampness and injury.

Set No.	Number of Bits Per Set	Weight Per Set	Per Set
232½ R	SNELL EXTRA BITS; 13 bits, one each, 4 to 16-16ths inclusive	3¾ lbs.	\$8.50
332½ R	SNELL EXTENSION LIP BITS; 13 bits, one each, 4 to 16-16ths, inclusive	3¾ lbs.	8.50
632½ R	STAR BITS; 13 bits, one each, 4 to 16-16ths, inclusive	4½ lbs.	8.50
832½ R	SOLID CENTER BITS; 13 bits, one each, 4 to 16-16ths, inclusive	3¾ lbs.	8.50
132½ R	BATES BITS; 13 bits, one each, 4 to 16-16ths, inclusive	3½ lbs.	8.50

NOTE.—Sets of 6, 8 and 9 bits in canvas rolls will be furnished in any of the above styles; numbers, sizes and list prices are as for sets on preceding page, except the letter R is added to the number.

SNELL COMBINATION BIT SET



No. 106

Containing one each, 4, 5, 6, 7 and 8/16ths Bates Auger Bits, and one Snell Clark Expansive Bit with two cutters, one boring from 8/16ths to 14/16ths and the other from 14/16ths to 24/16ths inch.

Set No.	Weight Per Set	Per Set
106 In a slide cover varnished wood box	1½ lbs.	\$8.00

BATES CAST STEEL AUGER BITS, IN FLAT BOXES

Set No.	Quarters	Number of Bits Per Set	Weight Per Set	Per Set
111¼ F	11¼	1 each, 4, 5, 6, 8, 10 and 12-16ths	1¾ lbs.	\$3.75
114 F	14	1 each, 4, 6, 8, 10, 12 and 16-16ths	2 lbs.	4.10
118¾ F	18¾	1 each, 4, 5, 6, 8, 10, 12, 14 and 16-16ths	2½ lbs.	5.50
132½ F	32½	1 each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths	4 lbs.	8.50
Farmers				
11¼	11¼	1 each, 4, 5, 6, 8, 10 and 12-16ths	1¾ lbs.	3.75

SNELL CAR BITS



Snell Extra No. 206



Snell Extension Lip No. 306



Snell Star No. 606



Snell Solid Center No. 806

All the above are forged from crucible steel; full polished, except nib. Used by car builders because of their many excellent boring features and good chip clearance.

Price List—Nos. 206, 306, 606 and 806

Length of Twist, 12 Inches; Length Over All, 18 Inches

Size Inches, in 16ths.....	4	5	6	7	8	9	10	11	12
Per Dozen	\$11.25	11.25	11.25	11.25	11.25	12.50	13.75	15.00	16.25
Approx. Weight Per Doz., Lbs.	2¼	2¾	3⅛	3⅝	4⅞	5	5⅞	5⅞	6¾
Size Inches, in 16ths.....	13	14	15	16	17	18	20	22	24
Per Dozen	\$17.50	19.00	20.50	22.00	24.00	26.00	30.00	34.00	38.00
Approx. Weight Per Doz., Lbs.	7⅞	8⅞	9	9⅞	9¾	10⅞	12½	15¼	16

All the above, half dozen in a box

IN SETS, ASSORTED

Set of 21 Quarters, contains two bits each, 4 and 8-16ths, and one each, 5, 6, 7, 9, 10, 11 and 12-16ths; approximate weight per set, 4¾ lbs.....	Per Set \$11.00
Set of 24 Quarters, contains two bits each, 6, 8 and 10-16ths and one each, 4, 5, 7, 9, 11 and 12-16ths; approximate weight per set, 5 lbs.....	12.25
Set of 32½ Quarters, contains one bit each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16-16ths; approximate weight per set, 6¾ lbs.....	16.25

JOHN H. GRAHAM & CO. DIRECT REPRESENTATIVES

SNELL IMPROVED SHIP AUGERS

Forged from crucible steel; lacquered hollow, polished edge. These augers have been standard with ship builders for nearly a century and are the best known and the most used by all ship, dock and heavy timber workers; have heavy, square nib for use with auger handles or for welding to extension stems or to single or double crank handles; No. 542 are preferred where very accurate boring is essential as in ship yards, as they do not drift off with the grain.



WITH SCREW, No. 541

Size Inches, in 8ths.....	2	2½, 3	3½, 4	4½, 5	5½, 6	6½, 7	7½, 8
Per Dozen	\$11.00	11.00	11.00	11.00	12.00	13.00	14.50
Length Twist, Inches.....	10	10	10	10	12	12	12
Total Length, Inches.....	14	14	14	14	16	16	16
Approx. Weight Per Doz., Lbs..	1¾	2	3½	6	8½	12	14½
Size Inches, in 8ths.....	8½, 9	9½, 10	10½, 11	11½, 12	12½, 13	13½, 14	
Per Dozen	\$16.00	18.00	20.00	23.00	27.00	32.00	
Length Twist, Inches.....	14	14	14	14	15	15	
Total Length, Inches.....	18	18	18	18	20	20	
Approx. Weight Per Doz., Lbs..	21	25	30	34	39	44	
Sizes Inches, in 8ths.....	14½, 15	15½, 16	16½, 17	17½, 18	18½, 19	19½, 20	
Per Dozen	\$38.00	45.00	57.00	72.00	86.00	101.00	
Length Twist, Inches.....	15	15	15	15	15	15	
Total Length, Inches.....	20	20	20	20	20	20	
Approx. Weight Per Doz., Lbs..	48	54	59	66	69	80	
Sizes Inches, in 8ths.....	20½, 21	21½, 22	22½, 23	23½, 24	24½, 25	25½, 26	
Per Dozen	\$115.00	130.00	144.00	158.00	173.00	187.00	
Length Twist, Inches.....	15	15	15	15	15	15	
Total Length, Inches.....	20	20	20	20	20	20	
Approx. Weight Per Doz., Lbs..	82	85	92	97	105	111	
Size Inches, in 8ths.....	26½, 27	27½, 28	28½, 29	29½, 30	30½, 31	31½, 32	
Per Dozen	\$201.00	216.00	231.00	245.00	260.00	274.00	
Length Twist, Inches.....	15	15	15	15	15	15	
Total Length, Inches.....	20	20	20	20	20	20	
Approx. Weight Per Doz., Lbs..	118	128	143	161	178	188	



WITHOUT SCREW, No. 542

Size Inches, in 8ths.....	2	2½, 3	3½, 4	4½, 5	5½, 6	6½, 7	7½, 8
Per Dozen	\$13.20	13.20	13.20	13.20	14.40	15.60	17.40
Length Twist, Inches.....	10	10	10	10	12	12	12
Total Length, Inches.....	14	14	14	14	16	16	16
Approx. Weight Per Doz., Lbs..	1¾	2	3½	6	8½	12	14½
Size Inches, in 8ths.....	8½, 9	9½, 10	10½, 11	11½, 12	12½, 13	13½, 14	
Per Dozen	\$19.20	21.60	24.00	27.60	32.40	38.40	
Length Twist, Inches.....	14	14	14	14	15	15	
Total Length, Inches.....	18	18	18	18	20	20	
Approx. Weight Per Doz., Lbs..	21	25	30	34	39	44	
Sizes Inches, in 8ths.....	14½, 15	15½, 16	16½, 17	17½, 18	18½, 19	19½, 20	
Per Dozen	\$45.60	54.00	68.40	86.40	103.20	121.20	
Length Twist, Inches.....	15	15	15	15	15	15	
Total Length, Inches.....	20	20	20	20	20	20	
Approx. Weight Per Doz., Lbs..	48	54	59	66	69	80	
Sizes Inches, in 8ths.....	20½, 21	21½, 22	22½, 23	23½, 24	24½, 25	25½, 26	
Per Dozen	\$138.00	156.00	172.80	189.60	207.60	224.40	
Length Twist, Inches.....	15	15	15	15	15	15	
Total Length, Inches.....	20	20	20	20	20	20	
Approx. Weight Per Doz., Lbs..	82	85	92	97	105	111	
Size Inches, in 8ths.....	26½, 27	27½, 28	28½, 29	29½, 30	30½, 31	31½, 32	
Per Dozen	\$241.20	259.20	277.20	294.00	312.00	328.80	
Length Twist, Inches.....	15	15	15	15	15	15	
Total Length, Inches.....	20	20	20	20	20	20	
Approx. Weight Per Doz., Lbs..	118	128	143	161	178	188	

2 to 8/8ths, half dozen in a box; 8½ to 16/8ths, quarter dozen in a box; larger sizes individually wrapped in heavy paper.

SNELL SHIP AUGERS WITH EXTRA LENGTH TWIST



WITH SCREW, No. 552

Length of Shank, 6 Inches; Prices with Screw

Sizes in 8ths of an Inch	Length of Twist, 18 In.	20 In.	22 In.	24 In.	30 In.	36 In.	Add for Each Additional 6-In. Twist
4 and Under	Per Dozen \$15.00	\$18.00	\$21.00	.....	.....	.....	.....
4½	Per Dozen 16.50	19.80	23.10	.....	.....	.....	.....
5	Per Dozen 18.00	21.30	24.60	\$27.90	.....	.....	.....
5½	Per Dozen 19.50	23.10	26.70	30.30	.....	.....	.....
6	Per Dozen 21.00	24.60	28.20	31.80	\$42.60	\$53.40	\$10.80
6½	Per Dozen 22.80	26.70	30.60	34.50	46.20	57.90	11.70
7	Per Dozen 24.60	28.50	32.40	36.30	48.00	59.70	11.70
7½	Per Dozen 26.40	30.60	34.80	39.00	51.60	64.20	12.60
8	Per Dozen 28.20	32.40	36.60	40.80	53.40	66.00	12.60
8½	Per Dozen 30.00	34.50	39.00	43.50	57.00	70.50	13.50
9	Per Dozen 31.80	36.30	40.80	45.30	58.88	72.30	13.50
9½	Per Dozen 33.60	38.40	43.20	48.00	62.40	76.80	14.40
10	Per Dozen 35.40	40.20	45.00	49.80	64.20	78.60	14.40
10½	Per Dozen 37.80	42.90	48.00	53.10	68.40	83.70	15.30
11	Per Dozen 40.20	45.30	50.40	55.50	70.80	86.10	15.30
11½	Per Dozen 42.60	48.00	53.40	58.80	75.00	91.20	16.20
12	Per Dozen 45.00	50.40	55.80	61.20	77.40	93.60	16.20
12½	Per Dozen 48.00	54.00	60.00	66.00	84.00	102.00	18.00
13	Per Dozen 51.00	57.00	63.00	69.00	87.00	105.00	18.00
13½	Per Dozen 54.00	60.60	67.20	73.80	93.60	113.40	19.80
14	Per Dozen 57.00	63.60	70.20	76.80	96.60	116.40	19.80
14½	Per Dozen 60.00	67.20	74.40	81.60	103.20	124.80	21.60
15	Per Dozen 63.00	70.20	77.40	84.60	106.20	127.80	21.60
15½	Per Dozen 66.00	73.80	81.60	89.40	112.80	136.20	23.40
16	Per Dozen 69.00	76.80	84.60	92.40	115.80	139.20	23.40
16½ and 17	Per Dozen 84.00	92.40	100.80	109.20	134.40	159.60	25.20
17½	Per Dozen 93.00	102.30	111.60	120.90	148.80	176.70	27.90
18	Per Dozen 102.00	112.20	122.40	132.60	163.20	193.80	30.60

Augers of larger diameter than 18/8 inch, add \$9.00 per dozen to 18-inch twist list for each 1/16th inch extra, and if of longer twist than 18 inches, add 10 per cent. of the 18-in. twist list for each 2 inches of extra twist.

All ship augers with shanks longer than regular, but not exceeding 18 inches length of shank, add \$7.50 per dozen to list prices.

SNELL SHIP AUGERS WITH EXTRA LENGTH TWIST



WITHOUT SCREW, No. 553

For prices of No. 553, without screw, add 20 per cent to above lists.

NOTE—All the above are MADE TO ORDER ONLY.

JOHN H. GRAHAM & CO. DIRECT REPRESENTATIVES

SNELL SHIP AUGERS WITH RING

Forged from crucible steel; lacquered hollow, polished edge. The best ring auger of any type, made with forged rings; No. 545 is preferred where very accurate boring is essential; does not drift off with the grain.



WITH SCREW, No. 544

Size Inches, in 8ths.....	4	4½	5	5½	6	6½, 7	7½, 8
Per Dozen	\$15.10	15.10	15.10	16.20	16.20	17.30	18.95
Length Twist, Inches.....	10	12	12	12	12	12	12, 12
Length Shank, Inches.....	10	8	8	8	10	10	10, 12
Approx. Weight Per Doz., Lbs..	9¾	10	11	12¾	13	16	18
Size Inches, in 8ths.....	8½, 9	9½, 10	10½, 11	11½, 12	12½, 13	13½, 14	14½, 15
Per Dozen	\$20.60	22.80	25.00	28.30	32.70	38.20	44.80
Length Twist, Inches.....	14	14	14	14	15	15	15
Length Shank, Inches.....	12	12	12	12	12	12	12
Approx. Weight Per Doz., Lbs..	23	30	37	44	50	57	64
Size Inches, in 8ths.....	15½, 16	16½, 17	17½, 18	18½, 19	19½, 20	20½, 21	21½, 22
Per Dozen	\$52.50	62.70	79.20	94.60	111.10	126.50	143.00
Length Twist, Inches.....	15	15	15	15	15	15	15
Length Shank, Inches.....	12	12	12	12	12	12	12
Approx. Weight Per Doz., Lbs..	71	79	86	91	95	100	105
Size Inches, in 8ths.....	22½, 23	23½, 24	24½, 25	25½, 26	26½, 27	27½, 28	28½, 29
Per Dozen	\$158.40	173.80	189.75	205.70	221.65	237.60	253.55
Length Twist, Inches.....	15	15	15	15	15	15	15
Length Shank, Inches.....	12	12	12	12	12	12	12
Approx. Weight Per Doz., Lbs..	112	123	130	137	143	150	156
Size Inches, in 8ths.....	29½, 30	30½, 31	31½, 32	32½, 33	33½, 34	34½, 35	35½, 36
Per Dozen	\$269.50	285.10	300.65	316.25	331.85	347.45	363.00
Length Twist, Inches.....	15	15	15	15	15	15	15
Length Shank, Inches.....	12	12	12	12	12	12	12
Approx. Weight Per Doz., Lbs..	162	168	174	180	186	192	198

WITHOUT SCREW, No. 545

Size Inches, in 8ths.....	4	4½	5	5½	6	6½, 7	7½, 8
Per Dozen	\$18.12	18.12	18.12	19.44	19.44	20.76	22.74
Length Twist, Inches.....	10	12	12	12	12	12	12, 12
Length Shank, Inches.....	10	8	8	8	10	10	10, 12
Approx. Weight Per Doz., Lbs..	9¾	10	11	12¾	13	16	18
Size Inches, in 8ths.....	8½, 9	9½, 10	10½, 11	11½, 12	12½, 13	13½, 14	14½, 15
Per Dozen	\$24.72	27.36	30.00	33.96	39.24	45.84	53.76
Length Twist, Inches.....	14	14	14	14	15	15	15
Length Shank, Inches.....	12	12	12	12	12	12	12
Approx. Weight Per Doz., Lbs..	23	30	37	44	50	57	64
Size Inches, in 8ths.....	15½, 16	16½, 17	17½, 18	18½, 19	19½, 20	20½, 21	21½, 22
Per Dozen	\$63.00	75.24	95.04	113.52	133.32	151.80	171.60
Length Twist, Inches.....	15	15	15	15	15	15	15
Length Shank, Inches.....	12	12	12	12	12	12	12
Approx. Weight Per Doz., Lbs..	71	79	86	91	95	100	105
Size Inches, in 8ths.....	22½, 23	23½, 24	24½, 25	25½, 26	26½, 27	27½, 28	28½, 29
Per Dozen	\$190.08	208.56	227.70	246.84	265.98	285.12	304.26
Length Twist, Inches.....	15	15	15	15	15	15	15
Length Shank, Inches.....	12	12	12	12	12	12	12
Approx. Weight Per Doz., Lbs..	112	123	130	137	143	150	156
Size Inches, in 8ths.....	29½, 30	30½, 31	31½, 32	32½, 33	33½, 34	34½, 35	35½, 36
Per Dozen	\$323.40	342.12	360.78	379.50	389.22	416.94	435.60
Length Twist, Inches.....	15	15	15	15	15	15	15
Length Shank, Inches.....	12	12	12	12	12	12	12
Approx. Weight Per Doz., Lbs..	162	168	174	180	186	192	198

Individually wrapped in heavy paper

Note—Plain Wooden Handles for Ring Augers can be furnished; prices (according to size) on application.

SNELL PNEUMATIC AUGERS



WITH SCREW, No. 535



WITHOUT SCREW, No. 536

These ship auger machine bits are commonly known as pneumatic or air augers, being used in machines operated by compressed air, also designed for use in electrically-driven machines.

For nearly a century the "Snell" name has stood for all that is best in ship auger construction. No other type can equal the Snell Single Twist, which is preferred and specified by ship, bridge and dock builders and for all heavy work where quality tools are essential.

All the above are Made to Order Only

List prices are same as those for Machine Bits on pages 18 and 19.

SNELL SHIP AUGER BITS



WITH SCREW, No. 503

Forged from crucible steel. Made with single cutting edge and one side lip, for difficult boring in hard, knotty or end grain wood; bores easily and clears chips readily.

Length of Twist, 5 Inches; Length Over All, 9 Inches

Size Inches, in 8ths..	2	2½, 3	3½, 4	4½, 5	5½, 6	6½, 7	7½, 8	8½, 9	9½, 10
Per Dozen	\$6.00	6.00	6.00	7.50	9.00	10.50	12.00	13.50	15.00
Weight Per Dozen, Lbs.	1½	1¾	2¾	4	5	5½	6¼	7¾	8

Half dozen in a box

IN SETS, ASSORTED

Per Set

Set No. 503 A—Contains one bit each, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 7½ and 8-8ths; weight per set, 7¾ lbs. **\$9.00**

WITHOUT SCREW, No. 504

For Very Straight Boring, Does not Drift Off with the Grain

Size Inches, in 8ths..	2	2½, 3	3½, 4	4½, 5	5½, 6	6½, 7	7½, 8	8½, 9	9½, 10
Per Dozen	\$7.20	7.20	7.20	9.00	10.80	12.60	14.40	16.20	18.00
Weight Per Dozen, Lbs.	1½	1¾	2¾	4	5	5½	6¼	7¾	8

Half dozen in a box

IN SETS, ASSORTED

Per Set

Set No. 504 A—Contains one bit each, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 7½ and 8-8ths; weight per set, 7¾ lbs. **\$10.80**

SNELL IMPROVED SHIP AUGER CAR BITS



Forged from crucible steel; lacquered twists, polished edges and rounds. Used by car and ship builders, millwrights and others doing deep boring; made with a good clearance for chips and accurately formed twist so that they will work easily and true in cross grain, angular or end boring.

No. 509—WITH SCREW, 12 Inch TWIST, 18 Inches Over All

Size Inches, in 8ths.....	2½, 3	3½, 4	4½, 5	5½, 6	6½, 7	7½, 8	8½, 9
Per Dozen	\$11.00	11.00	11.00	12.00	13.00	14.50	16.00
Approx. Weight Per Doz., Lbs..	2¾	3¾	6¼	8¾	11¾	15¼	17½
Size Inches, in 8ths.....	9½, 10	10½, 11	11½, 12	12½, 13	13½, 14	14½, 15	15½, 16
Per Dozen	\$18.00	20.00	23.00	27.00	32.00	38.00	45.00
Approx. Weight Per Doz., Lbs..	20½	24	27½	36	44	52½	59½

No. 507—WITH SCREW, 8 Inch TWIST, 12 Inches Over All

Size Inches, in 8ths.....	2½, 3	3½, 4	4½, 5	5½, 6	6½, 7	7½, 8	8½, 9	9½, 10	10½, 11	11½, 12
Per Dozen	\$10.00	10.00	10.00	11.00	12.00	13.50	15.00	16.50	18.50	21.00
Approx. Weight Per Doz., Lbs..	1⅞	2⅞	4⅞	5¾	7¾	9	10¼	12	13¾	15¾

WITHOUT SCREW

Preferred for boring in green, pithy and knotty woods, does not drift off with the grain.

No. 510—WITHOUT SCREW, 12 Inch TWIST, 18 Inches Over All

Size Inches, in 8ths.....	2½, 3	3½, 4	4½, 5	5½, 6	6½, 7	7½, 8	8½, 9
Per Dozen	\$13.20	13.20	13.20	14.40	15.60	17.40	19.20
Approx. Weight Per Doz., Lbs..	2¾	3¾	6¼	8¾	11¾	15¼	17½
Size Inches, in 8ths.....	9½, 10	10½, 11	11½, 12	12½, 13	13½, 14	14½, 15	15½, 16
Per Dozen	\$21.60	24.00	27.60	32.40	38.40	45.60	54.00
Approx. Weight Per Doz., Lbs..	20½	24	27½	36	44	52½	59½

No. 508—WITHOUT SCREW, 8 Inch TWIST, 12 Inches Over All

Size Inches, in 8ths.....	2½, 3	3½, 4	4½, 5	5½, 6	6½, 7	7½, 8	8½, 9	9½, 10	10½, 11	11½, 12
Per Dozen	\$12.00	12.00	12.00	13.20	14.40	16.20	18.00	19.80	22.20	25.20
Approx. Weight Per Doz., Lbs..	1⅞	2⅞	4⅞	5¾	7¾	9	10¼	12	13¾	15¾

NOTE.—12 Inch TWIST is FURNISHED, Unless Otherwise Specified

All the above 2½ to 8/8ths., half dozen in a box; 8½ to 16/8ths., quarter dozen in a box.

SNELL SOLID CENTER SHIP AUGERS



WITH SCREW, No. 841—WITHOUT SCREW, No. 842

Forged from crucible steel, polished bright.

Used principally by ship and car builders; has one cutting edge and one side lip, and is equal to any ship auger of this type.

Length of Shank, 6 Inches

Size Inches, in 8ths..	2	2½	3	3½	4	4½	5
Per Dozen	\$11.00	11.00	11.00	11.00	11.00	11.00	11.00
Length Over All, Inches.	14	14	14	14	14	16	16
Weight Per Dozen, Lbs..	2	2½	3¼	3¾	4¾	6	6¼
Size Inches, in 8ths..	5½	6	6½	7	7½	8	8½
Per Dozen	\$12.00	12.00	13.00	13.00	14.50	14.50	16.00
Length Over All, Inches.	16	16	16	16	16	16	19
Weight Per Dozen, Lbs..	6¾	7¾	8	8½	8¾	9¼	10½
Size Inches, in 8ths..	9	9½	10	10½	11	11½	12
Per Dozen	\$16.00	18.00	18.00	20.00	20.00	23.00	23.00
Length Over All, Inches.	19	19	19	19	19	19	19
Weight Per Dozen, Lbs..	10¾	11¼	12¼	12¾	13½	14¼	15

2 to 8/8ths, half-dozen in a box; 8½/8ths and larger, quarter dozen in a box

SNELL SOLID CENTER LONG TWIST SHIP AUGERS

For lists on Solid Center Long Twist Augers use Long Twist Ship Auger lists on page 12.

SNELL SOLID CENTER SHIP AUGER CAR BITS



WITH SCREW, No. 809—WITHOUT SCREW, No. 810

Used chiefly by ship and car builders for heavy work

Length of Twist, 12 Inches; Length Over All, 18 Inches

Size Inches, in 8ths..	2	2½	3	3½	4	4½	5	5½	6
Per Dozen	\$11.25	11.25	11.25	11.25	11.25	12.50	13.75	15.00	16.25
Weight Per Dozen, Lbs..	2	2¼	3¾	4	4¾	6	6¼	6¾	7¾
Size Inches, in 8ths..	6½	7	7½	8	8½	9	10	11	12
Per Dozen	\$17.50	19.00	20.50	22.00	24.00	26.00	30.00	34.00	38.00
Weight Per Dozen, Lbs..	8	8½	8¾	9	10½	10¾	12	13½	15

2 to 8/8ths., half dozen in a box; 8½/8ths. and larger, quarter dozen in a box

SNELL SOLID CENTER SHIP AUGER BITS



WITH SCREW, No. 803—WITHOUT SCREW, No. 804

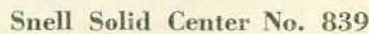
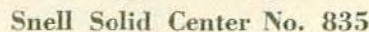
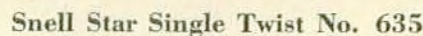
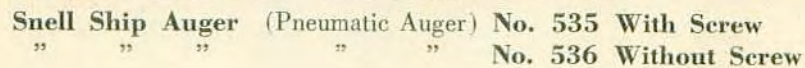
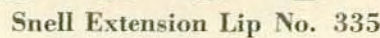
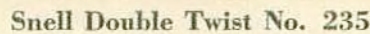
Forged from crucible steel; full polished, except nib.

Designed primarily for rapid, heavy work; has one cutting edge and one side lip.

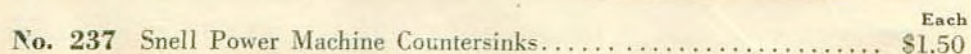
Size Inches, in 8ths..	2	2½	3	3½	4	4½	5	5½	6
Per Dozen	\$6.00	6.00	6.00	6.00	6.00	7.50	7.50	9.00	9.00
Length Over All, Inches.	7½	7¾	7¾	8	8½	8¾	8¾	8½	8¾
Weight Per Dozen, Lbs..	1	1¼	1½	1¾	2	2¼	2½	2¾	3
Size Inches, in 8ths..	6½	7	7½	8	8½	9	10	11	12
Per Dozen	\$10.50	10.50	12.00	12.00	13.50	13.50	15.00	16.50	18.00
Length Over All, Inches.	8¾	8¾	9	9	9½	9¼	9½	9½	9½
Weight Per Dozen, Lbs..	3¼	3¾	4¼	4½	4¾	5½	6	6½	8

2 to 10/8ths.; half dozen in a box; 11 and 12/8ths., quarter dozen in a box.

The Snell No. 235 is always sent when no pattern is specified.



SNELL POWER MACHINE COUNTERSINKS



LIST FOR ALL STYLES OF POWER MACHINE BITS

Illustrations on Page 17

LENGTH OF TWIST, AS BELOW

Unless Otherwise Specified, Shanks are Furnished $\frac{1}{2}$ Inch x $2\frac{1}{4}$ Inches

List Adopted October 12, 1905

Diameter Inches	6-Inch Per Doz.	8-Inch Per Doz.	10-Inch Per Doz.	12-Inch Per Doz.	14-Inch Per Doz.	16-Inch Per Doz.	18-Inch Per Doz.	20-Inch Per Doz.	22-Inch Per Doz.	24-Inch Per Doz.
4-16	\$10.80	\$12.96	\$15.12	\$17.28	....	....	....	....	....	....
5-16	10.80	12.96	15.12	17.28	....	....	....	....	....	....
6-16	10.80	12.96	15.12	17.28	\$19.44	\$21.60	....	....	....	....
7-16	10.80	12.96	15.12	17.28	19.44	21.60	....	....	....	....
8-16	10.80	12.96	15.12	17.28	19.44	21.60	\$23.76	\$25.92	\$28.08	....
9-16	12.00	14.40	16.80	19.20	21.60	24.00	26.40	28.80	31.20	....
10-16	13.20	15.84	18.48	21.12	23.76	26.40	29.04	31.68	34.32	\$36.96
11-16	14.40	17.28	20.16	23.04	25.92	28.80	31.68	34.56	37.44	40.32
12-16	15.60	18.72	21.84	24.96	28.08	31.20	34.32	37.44	40.56	43.68
13-16	16.80	20.16	23.52	26.88	30.24	33.60	36.96	40.32	43.68	47.04
14-16	18.00	21.60	25.20	28.80	32.40	36.00	39.60	43.20	46.80	50.40
15-16	19.20	23.04	26.88	30.72	34.56	38.40	42.24	46.08	49.92	53.76
16-16	20.40	24.48	28.56	32.64	36.72	40.80	44.88	48.96	53.04	57.12
17-16	21.60	25.92	30.24	34.56	38.88	43.20	47.52	51.84	56.16	60.48
18-16	22.80	27.36	31.92	36.48	41.04	45.60	50.16	54.72	59.28	63.84
19-16	24.00	28.80	33.60	38.40	43.20	48.00	52.80	57.60	62.40	67.20
20-16	25.20	30.24	35.28	40.32	45.36	50.40	55.44	60.48	65.52	70.56
21-16	26.40	31.68	36.96	42.24	47.52	52.80	58.08	63.36	68.64	73.92
22-16	27.60	33.12	38.64	44.16	49.68	55.20	60.72	66.24	71.76	77.28
23-16	28.80	34.56	40.32	46.08	51.84	57.60	63.36	69.12	74.88	80.64
24-16	30.00	36.00	42.00	48.00	54.00	60.00	66.00	72.00	78.00	84.00
25-16	31.50	37.80	44.10	50.40	56.70	63.00	69.30	75.60	81.90	88.20
26-16	33.00	39.60	46.20	52.80	59.40	66.00	72.60	79.20	85.80	92.40
27-16	34.50	41.40	48.30	55.20	62.10	69.00	75.90	82.80	89.70	96.60
28-16	36.00	43.20	50.40	57.60	64.80	72.00	79.20	86.40	93.60	100.80
29-16	37.50	45.00	52.50	60.00	67.50	75.00	82.50	90.00	97.50	105.00
30-16	39.00	46.80	54.60	62.40	70.20	78.00	85.80	93.60	101.40	109.20
31-16	40.50	48.60	56.70	64.80	72.90	81.00	89.10	97.20	105.30	113.40
32-16	42.00	50.40	58.80	67.20	75.60	84.00	92.40	100.80	109.20	117.60
33-16	43.80	52.56	61.32	70.08	78.84	87.60	96.36	105.12	113.88	122.64
34-16	45.60	54.72	63.84	72.96	82.08	91.20	100.32	109.44	118.56	127.68
35-16	47.40	56.88	66.36	75.84	85.32	94.80	104.28	113.76	123.24	132.72
36-16	49.20	59.04	68.88	78.72	88.56	98.40	108.24	118.08	127.92	137.76
37-16	51.00	61.20	71.40	81.60	91.80	102.00	112.20	122.40	132.60	142.80
38-16	52.80	63.36	73.92	84.48	95.04	105.60	116.16	126.72	137.28	147.84
39-16	54.60	65.52	76.44	87.36	98.28	109.20	120.12	131.04	141.96	152.88
40-16	56.40	67.68	78.96	90.24	101.52	112.80	124.08	135.36	146.64	157.92
42-16	60.60	72.72	84.84	96.96	109.08	121.20	133.32	145.44	157.56	169.68
44-16	64.80	77.76	90.72	103.68	116.64	129.60	142.56	155.52	168.48	181.44
46-16	69.00	82.80	96.60	110.40	124.20	138.00	151.80	165.60	179.40	193.20
48-16	73.20	87.84	102.48	117.12	131.76	146.40	161.04	175.68	190.32	204.96
50-16	78.00	93.60	109.20	124.80	140.40	156.00	171.60	187.20	202.80	218.40
52-16	82.80	99.36	115.92	132.48	149.04	165.60	182.16	198.72	215.28	231.84
54-16	87.60	105.12	122.64	140.16	157.68	175.20	192.72	210.24	227.76	245.28
56-16	92.40	110.88	129.36	147.84	166.32	184.80	203.28	221.76	240.24	258.72

JOHN H. GRAHAM & CO. DIRECT REPRESENTATIVES

LIST FOR ALL STYLES OF POWER MACHINE BITS—Continued

Illustrations on Page 17

LENGTH OF TWIST, AS BELOW

Unless Otherwise Specified, Shanks are Furnished $\frac{1}{2}$ Inch x $2\frac{1}{4}$ Inches

Diameter Inches	26-Inch Per Doz.	28-Inch Per Doz.	30-Inch Per Doz.	32-Inch Per Doz.	34-Inch Per Doz.	36-Inch Per Doz.	42-Inch Per Doz.	48-Inch Per Doz.	54-Inch Per Doz.	60-Inch Per Doz.
10-16	\$39.60	\$42.24	....	....	....	....	....	....	....	....
11-16	43.20	46.08	....	....	....	....	....	....	....	....
12-16	46.80	49.92	\$53.04	\$56.16	\$59.28	\$62.40	\$71.76	\$81.12	\$90.48	\$99.84
13-16	50.40	53.76	57.12	60.48	63.84	67.20	77.28	87.36	97.44	107.52
14-16	54.00	57.60	61.20	64.80	68.40	72.00	82.80	93.60	104.40	115.20
15-16	57.60	61.44	65.28	69.12	72.96	76.80	88.32	99.84	111.36	122.88
16-16	61.20	65.28	69.36	73.44	77.52	81.60	93.84	106.08	118.32	130.56
17-16	64.80	69.12	73.44	77.76	82.08	86.40	99.36	112.32	125.28	138.24
18-16	68.40	72.96	77.52	82.08	86.64	91.20	104.88	118.56	132.24	145.92
19-16	72.00	76.80	81.60	86.40	91.20	96.00	110.40	124.80	139.20	153.60
20-16	75.60	80.64	85.68	90.72	95.76	100.80	115.92	131.04	146.16	161.28
21-16	79.20	84.48	89.76	95.04	100.32	105.60	121.44	137.28	153.12	168.96
22-16	82.80	88.32	93.84	99.36	104.88	110.40	126.96	143.52	160.08	176.64
23-16	86.40	92.16	97.92	103.68	109.44	115.20	132.48	149.76	167.04	184.32
24-16	90.00	96.00	102.00	108.00	114.00	120.00	138.00	156.00	174.00	192.00
25-16	94.50	100.80	107.10	113.40	119.70	126.00	144.90	163.80	182.70	201.60
26-16	99.00	105.60	112.20	118.80	125.40	132.00	151.80	171.60	191.40	211.20
27-16	103.50	110.40	117.30	124.20	131.10	138.00	158.70	179.40	200.10	220.80
28-16	108.00	115.20	122.40	129.60	136.80	144.00	165.60	187.20	208.80	230.40
29-16	112.50	120.00	127.50	135.00	142.50	150.00	172.50	195.00	217.50	240.00
30-16	117.00	124.80	132.60	140.40	148.20	156.00	179.40	202.80	226.20	249.60
31-16	121.50	129.60	137.70	145.80	153.90	162.00	186.30	210.60	234.90	259.20
32-16	126.00	134.40	142.80	151.20	159.60	168.00	193.20	218.40	243.60	268.80
33-16	131.40	140.16	148.92	157.68	166.44	175.20	201.48	227.76	254.04	280.32
34-16	136.80	145.92	155.04	164.16	173.28	182.40	209.76	237.12	264.48	291.84
35-16	142.20	151.68	161.16	170.64	180.12	189.60	218.04	246.48	274.92	303.36
36-16	147.60	157.44	167.28	177.12	186.96	196.80	226.32	255.84	285.36	314.88
37-16	153.00	163.20	173.40	183.60	193.80	204.00	234.60	265.20	295.80	326.40
38-16	158.40	168.96	179.52	190.08	200.64	211.20	242.88	274.56	306.24	337.92
39-16	163.80	174.72	185.64	196.56	207.48	218.40	251.16	283.92	316.68	349.44
40-16	169.20	180.48	191.76	203.04	214.32	225.60	259.44	293.28	327.12	360.96
42-16	181.80	193.92	206.04	218.16	230.28	242.40	278.76	315.12	351.48	387.84
44-16	194.40	207.36	220.32	233.28	246.24	259.20	298.08	336.96	375.84	414.72
46-16	207.00	220.80	234.60	248.40	262.20	276.00	317.40	358.80	400.20	441.60
48-16	219.60	234.24	248.88	263.52	278.16	292.80	336.72	380.64	424.56	468.48
50-16	234.00	249.60	265.20	280.80	296.40	312.00	358.80	405.60	452.40	499.20
52-16	248.40	264.96	281.52	298.08	314.64	331.20	380.88	430.56	480.24	529.92
54-16	262.80	280.32	297.84	315.36	332.88	350.40	402.96	455.52	508.08	560.64
56-16	277.20	295.68	314.16	332.64	351.12	369.60	425.04	480.48	535.92	591.36

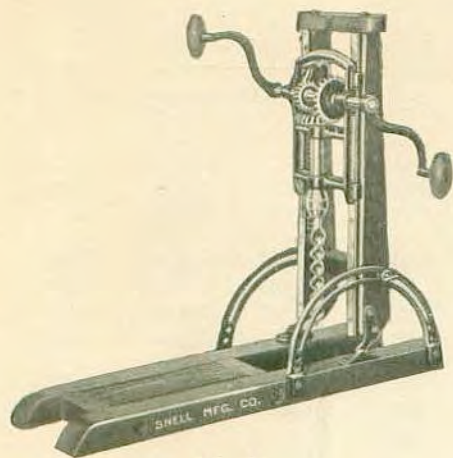
Note—No extra charge for turning shanks on machine bits to any size required, provided they are straight and do not exceed 3 inches in length or 12/16-inch diameter. For shanks exceeding 3 inches in length an extra charge will be made of 3 cents per inch and if tapered, \$1.80 per dozen, net.

Morse taper shanks and special taper shanks to blue print, \$2.50 per dozen, net.

Special shanks of any desired shape made to order. We will not be held responsible for perfect fit unless we are furnished a sample shank of exact size desired.

All bits made by odd 32ds will be charged the price of the 16th larger.

SNELL RICE PATENT BORING MACHINES



No. 1

ANGULAR

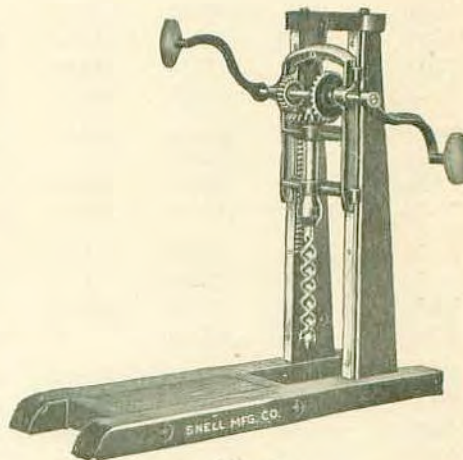
Natural finish and varnished hardwood base and uprights; Japanned cast iron arch, gears and cranks; steel spindle, chuck and axle; hardwood swivel grips; frame is firmly bolted; Japanned cast iron clamp frame at base of upright; adjustable for angular boring; width of base, 8 inches; length of base, 29 inches; height of upright, 26 inches; length of cranks, 8½ inches; bores, 10 inches deep.

No. 1 Angular; Weight each, 30 lbs..... Each
\$6.75
One in a case

UPRIGHT

Natural finish and varnished hardwood bolted frame; Japanned cast iron arch, gears, rack and cranks; steel spindle, chuck and axle; formed hardwood grips; width of base, 8 inches; length of base, 29 inches; height of upright, 26 inches; length of cranks, 8½ inches; bores 10 inches deep.

No. 2 Upright; Weight each, 25 lbs..... Each
\$5.50
One in a case



No. 2

EXTRA PARTS FOR ABOVE BORING MACHINES

No.	Description	Each	No.	Description	Each
1	Wooden Base	\$1.00	9	Bevel Gear, Small Hole on Spindle.....	\$0.60
2	Wooden Upright or Frame.....	1.80	10	Small Gear	.40
3	Circle	.60	11	Gear Rack, Screwed to Frame.....	.60
4	Crank <i>Spindle</i>	1.00	12	Steel Spring, Top of Wood Frame.....	.20
5	Arbor or Chuck with Set Screw.....	2.00	13	Set Screw	.20
6	Crank and Handle	.80	14	Hook and Eye	.60
7	Iron Sliding Frame	1.80	15	Thumb Screw	.20
8	Bevel Gear, Large Hole on Arbor.....	.60	16	Wrench	.20

SNELL BORING MACHINE AUGERS

SNELL EXTRA



No. 243

SNELL SOLID CENTER



No. 843

For use in hand boring machines; feed rapidly and cut smoothly; full polished.

Length of Twist, 7 to 8 Inches; Length Over All, 12 Inches

Size Inches	1/4	3/8	7/16	1/2	5/8	3/4	7/8	1	1 1/8
Per Dozen	\$10.00	10.00	10.00	10.00	10.00	11.00	13.00	15.00	17.00
Weight Per Dozen, Lbs..	4 3/4	4 1/2	5 1/4	5 3/4	6 3/4	7	7 1/4	7 1/2	8 1/2
Size Inches	1 1/4	1 3/8	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3
Per Dozen	\$19.00	21.00	24.00	28.00	32.00	42.00	52.00	72.00	92.00
Weight Per Dozen, Lbs..	9 3/4	10 3/4	11	13 1/2	15 1/2	18	24	32	40

2 1/4, 2 1/2, 2 3/4 and 3 Inch Sizes, not made in Solid Center

1/4 to 3/4 inch, half dozen in a box; 7/8 to 2 inch, quarter dozen in a box; larger sizes individually wrapped in heavy paper

IN SETS—ASSORTED

Set of 18 Quarters, contains one bit each, 1, 1 1/2 and 2 inches; weight per set, 3 lbs.....	Per Set
Set of 23 Quarters, contains one bit each, 1, 1 1/4, 1 1/2 and 2 inches; weight per set, 3 1/2 lbs.....	\$6.00
Set of 41 Quarters, contains one bit each, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4 and 2 inches; weight per set, 5 lbs..	7.50
	13.50

SNELL SHIP AUGER PATTERN BORING MACHINE AUGERS



No. 543

Forged from crucible steel; lacquered twists; polished edges.

Recommended for strength, rigidity, easy cutting and free clearance in boring hard woods.

Length of Twist, 7 to 8 Inches; Length Over All, 12 Inches

Size Inches	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2
Per Dozen	\$11.75	12.00	13.00	14.25	16.00	17.50	19.70	25.10	35.00	48.50
Weight Per Dozen, Lbs.	5 3/4	6 3/4	7	7 1/4	7 1/2	8 1/2	9 3/4	11	13 1/2	15 1/2

1/2 to 3/4 inch, half dozen in a box; 7/8 to 2 inch, quarter dozen in a box

IN SETS—ASSORTED

Set of 18 Quarters, contains one bit each, 1, 1 1/2 and 2 inches; weight per set, 3 1/2 lbs.....	Per Set
Set of 23 Quarters, contains one bit each, 1, 1 1/4, 1 1/2 and 2 inches; weight per set, 4 1/2 lbs.....	\$7.50
Set of 41 Quarters, contains one bit each, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, and 2 inches; weight per set, 5 1/2 lbs.	9.25
	16.50

SNELL CARPENTERS' NUT AUGERS



No. 240

Best quality crucible steel; 2 inch and smaller, polished finish.

Used chiefly by framers, bridge and trestle builders for heavy timber boring; construction of flat head is such that it feeds rapidly and clears easily, cutting edges and side lips being correctly formed and easily resharpened.

Length of Twist, 7 to 8 Inches

Size Inches	1½	5⁄8	¾	7⁄8	1	1½	1¾
Per Dozen	\$10.00	10.00	11.00	13.00	15.00	17.00	19.00
Length Over All, Inches.	16	16	16	17	17	18	18
Weight Per Dozen, Lbs..	4¾	5¾	7	8¾	9½	10½	11¾
Size Inches	1¾	1½	1¾	2	2½	2¼	2½
Per Dozen	\$21.00	24.00	28.00	32.00	37.00	42.00	52.00
Length Over All, Inches.	18	18	19	19	20	20	20
Weight Per Dozen, Lbs.	13	15½	17½	20	23½	27½	30½
Size Inches	2¾	3	3¼	3½	3¾	4	
Per Dozen	\$72.00	92.00	122.00	152.00	182.00	212.00	
Length Over All, Inches.	20	20	20	20	20	20	
Weight Per Dozen, Lbs...	35	40	43	48	52	54¾	

Sizes 1½ to 2 inches, half dozen in a box; 2½ to 4 inches, individually wrapped in heavy paper.

SNELL SOLID CENTER CARPENTERS' NUT AUGERS



No. 840

Forged from crucible steel; full polished, except nib.

Used chiefly for heavy timber boring; head has two cutters of the flat cut type, with side lips.

Length of Twist, 7 to 8 Inches

Size Inches	¾	1½	5⁄8	¾	7⁄8	1
Per Dozen	\$10.00	10.00	10.00	11.00	13.00	15.00
Length Over All, Inches.	16	16	16	16	17	17
Weight Per Dozen, Lbs...	3½	4¾	5¾	7	8¾	9½
Size Inches	1½	1¼	1¾	1½	1¾	2
Per Dozen	\$17.00	19.00	21.00	24.00	28.00	32.00
Length Over All, Inches.	18	18	18	18	19	19
Weight Per Dozen, Lbs...	10½	11¾	13	15½	17½	20

Half dozen in a box

NOTE—All augers are carefully oil tempered and sharpened and finished by hand.

JOHN H. GRAHAM & CO. DIRECT REPRESENTATIVES

SNELL SCOTCH EYE AUGERS



No. 245 A

Forged from crucible steel; polished twist; black head; black enameled round forged eyes; export type with flat cut head, made with coarse screw and especially designed for boring in hard woods.

LENGTH OF TWIST, 7 to 9 Inches, According to Diameter

Size Inches	1/4	5/16	3/8	7/16	1/2	9/16	5/8
Per Dozen	\$18.00	18.00	18.00	18.00	18.00	20.00	20.00
Length Over All, Inches.	20	20	20	21	21	21	22
Weight Per Dozen, Lbs..	4	4½	5½	6	6¾	7¾	8¾
Size Inches	3/4	13/16	7/8	15/16	1	1 1/8	1 1/4
Per Dozen	\$22.00	25.00	25.00	28.00	28.00	30.00	33.00
Length Over All, Inches.	22	22	22	22	23	24	25
Weight Per Dozen, Lbs..	10	11¾	12¾	13	13¾	15	17¼
Size Inches	1 1/8	1 1/2	1 5/8	1 3/4	1 7/8	2	2 1/4
Per Dozen	\$37.50	41.00	45.00	48.00	53.00	56.00	56.00
Length Over All, Inches.	25	25	25	26	26	26	26
Weight Per Dozen, Lbs..	19½	22	23½	25	28	29	29

Half dozen in a package

SNELL TREENAIL AUGERS



No. 249

Forged from crucible steel, full polished, black head.

Pointed for welding to cranks, also used in pneumatic machines for wooden ship building.

Shank, 5/8 x 6 Inches

Size Inches	1	1 1/8	1 1/4	1 3/8	1 1/2
Per Dozen	\$25.00	25.00	27.00	30.00	33.00
Length of Twist, Inches	12	12	13	14	15
Length Over All, Inches	18	18	19	20	21
Weight Per Dozen, Lbs..	13½	15	17½	18¾	20

NOTE.—Can be furnished in special diameters and lengths as desired; when ordering specify whether fine screw of 14 threads to inch, medium screw of 9 threads or coarse screw of 6 threads to inch is desired.

Half dozen in a package

SNELL ICE AUGERS



No. 91

Forged from crucible steel, welded on 8-inch crank handle, fitted with swivel head; total length, 31½ ft. Used for boring holes in ice to measure thickness or to start ice saws.

WITH CRANK HANDLE

Size Inches	1 1/4	1 1/2	2 1/2
Weight Per Dozen, Lbs..	80	90	140

WITHOUT CRANK HANDLE

Size Inches	1 1/4	1 1/2	2 1/2
Weight Per Dozen, Lbs..	26	36	81

PRICES ON APPLICATION

SNELL GAS FITTERS' AUGERS



No. 256

Specially made for gas fitters for boring through thick plastering, the screw being extra long so as to reach into the wood; regularly made with 8-inch twist and 10-inch round shank so that it can be welded to an extra extension; screws are from $\frac{1}{2}$ to 2 inches in length, varying with the diameter of the auger.

Diameter of Auger, In.	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
Per Dozen	\$19.00	21.50	24.00	30.00	34.00	44.00	52.00	60.00
For Pipe Size, Inches..	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	....	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Size of Shank, Inches...	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Weight Per Dozen, Lbs..	$10\frac{1}{2}$	$12\frac{1}{2}$	14	16	18	$23\frac{1}{2}$	28	30

NOTE.—These augers can be made with any shape or size of shank desired, to order; when ordering augers varying from above specifications, give full particulars; always order by the size of auger, and not the diameter of the pipe.

SNELL SHORT RING AUGERS



No. 244

Forged from crucible steel; two inches and smaller have polished twist; rings and part of rounds are black japanned.

Flat cut type, used by bridge and dock builders or for boring in heavy timbers.

LENGTH OF TWIST, 7 to 8 Inches

Size Inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$
Per Dozen	\$12.00	12.00	12.00	13.00	14.00	15.00	16.50
Length Over All, Inches.	15	15	15	15	16	16	18
Weight Per Dozen, Lbs..	$4\frac{1}{2}$	$6\frac{1}{4}$	7	$7\frac{3}{4}$	10	11	$11\frac{1}{4}$
Size Inches	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{5}{8}$	$1\frac{3}{4}$	2	$2\frac{1}{4}$
Per Dozen	\$18.25	20.00	22.75	24.50	26.75	30.00	39.00
Length Over All, Inches.	18	18	18	20	20	20	20
Weight Per Dozen, Lbs..	$12\frac{3}{4}$	$14\frac{3}{4}$	$16\frac{1}{2}$	17	$19\frac{1}{2}$	$21\frac{3}{4}$	23
Size Inches	$2\frac{1}{2}$	$2\frac{3}{4}$	3	$3\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{3}{4}$	4
Per Dozen	\$48.00	69.00	88.00	117.00	146.00	175.00	204.00
Length Over All, Inches.	20	20	20	20	20	20	20
Weight Per Dozen, Lbs..	$25\frac{1}{2}$	27	29	31	33	35	38

Sizes $\frac{3}{8}$ to 2 inches, half dozen in a package; $2\frac{1}{4}$ to 4 inches, individually wrapped in heavy paper

SNELL LONG OR CUBAN RING AUGERS



No. 245

Flat type head, with cast steel ring eye; two inches and smaller are polished; rings and part of rounds are black japanned.

LENGTH OF TWIST, 7 to 8 Inches

Size Inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$
Per Dozen	\$13.50	13.50	13.50	14.75	16.00	17.25	19.00	21.00
Length Over All, Inches.	20	20	20	20	22	22	22	22
Weight Per Dozen, Lbs..	$5\frac{1}{2}$	$6\frac{3}{4}$	$8\frac{3}{4}$	10	$12\frac{3}{4}$	$13\frac{3}{4}$	15	$17\frac{1}{4}$
Size Inches	$1\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{5}{8}$	$1\frac{3}{4}$	$1\frac{7}{8}$	2	$2\frac{1}{8}$	$2\frac{1}{4}$
Per Dozen	\$23.00	26.00	28.00	30.00	32.00	34.00	39.00	41.00
Length Over All, Inches.	24	24	24	24	24	24	24	24
Weight Per Dozen, Lbs..	$19\frac{1}{2}$	22	$23\frac{1}{2}$	25	28	29	$36\frac{1}{2}$	36
Size Inches	$2\frac{1}{4}$	$2\frac{1}{2}$	3	$3\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{3}{4}$	4	$4\frac{1}{4}$
Per Dozen	\$44.00	54.00	96.00	126.00	156.00	186.00	216.00	246.00
Length Over All, Inches.	26	26	26	26	26	26	26	26
Weight Per Dozen, Lbs..	43	50	$57\frac{1}{2}$	64	71	78	86	93

Sizes $\frac{3}{8}$ to 2 inches, half dozen in a package; $2\frac{1}{8}$ to 4 inches, individually wrapped in heavy paper

JOHN H. GRAHAM & CO. DIRECT REPRESENTATIVES

SNELL SOLID CENTER SHORT RING AUGERS



Illustration Shows Flat Type Head

Forged from crucible steel, polished twist and round; furnished also with lacquered twist; for deep boring and heavy work; fitted with riveted rings; detachable rings can be furnished.

FLAT TYPE HEAD, No. 844

EXTENSION LIP HEAD, No. 850

	Length of Twist, 7 Inches—Length of Shank, 11 Inches					
Size Inches, in 16ths.	6	7	8	9	10	11
Per Dozen	\$12.00	12.00	12.00	12.00	12.00	13.00
Weight Per Dozen, Lbs..	2½	3½	4¾	5¾	7	7¾
Size Inches, in 16ths..	13	14	15	16	17	18
Per Dozen	\$14.00	14.00	15.00	15.00	16.50	16.50
Weight Per Dozen, Lbs..	9½	10½	11½	12¾	13	14
Size Inches, in 16ths..	20	22	24	26	28	32
Per Dozen	\$18.25	20.00	22.75	24.50	26.75	30.00
Weight Per Dozen, Lbs..	15	16	17½	18½	19½	20

Quarter dozen in a package, wrapped in heavy paper

SNELL SOLID CENTER LONG RING AUGERS



Illustration Shows Extension Lip Head

FLAT TYPE HEAD, No. 845

EXTENSION LIP HEAD, No. 851

	Length of Twist, 12 Inches—Length of Shank, 12 Inches					
Size Inches, in 16ths.	6	7	8	9	10	11
Per Dozen	\$12.00	12.00	12.00	12.00	12.00	13.00
Weight Per Dozen, Lbs..	9	10	10½	11	11½	12
Size Inches, in 16ths..	13	14	15	16	17	18
Per Dozen	\$14.00	14.00	15.00	15.00	16.50	16.50
Weight Per Dozen, Lbs..	13	13½	14	14½	15	17½
Size Inches, in 16ths..	20	22	24	26	28	32
Per Dozen	\$18.25	20.00	22.75	24.50	26.75	30.00
Weight Per Dozen, Lbs..	18	20½	23	25½	29	30

Quarter dozen in a package, wrapped in heavy paper

SNELL MILLWRIGHT AUGERS



No. 247

Forged from crucible steel, polished twists; flat cut type; made with square nib or forged ring.

	Length of Twist, 12 Inches—Length Over All, 30 Inches					
Size Inches	1/2	9/16	5/8	11/16	3/4	13/16
Per Dozen	\$16.50	19.00	19.00	21.50	21.50	24.00
Weight Per Dozen, Lbs..	8	10	12	13	14	15
Size Inches	7/8	15/16	1	1 1/8	1 1/4	1 3/4
Per Dozen	\$24.00	26.50	30.00	30.00	34.00	38.00
Weight Per Dozen, Lbs..	16	17	17½	20	21½	22½
Size Inches	1 1/2	1 5/8	1 3/4	1 7/8	2	2 1/4
Per Dozen	\$44.00	48.00	52.00	56.00	60.00	60.00
Weight Per Dozen, Lbs..	24½	27½	31	35	42	42

NOTE.—For rings, add \$1.50 per dozen to LIST PRICES.

Individually wrapped in heavy paper

SNELL LONG RAFTING AUGERS



No. 246

Forged from crucible steel; two inches and smaller are polished finish; rings and part of rounds are black jappaned; used in heavy timber for deep boring, as in log rafts, booms, etc.

Length of Twist, 12 Inches—Length Over All, 30 Inches

Size Inches	1¼	1½	1¾	2	2¼	2½
Per Dozen	\$32.00	40.00	48.00	56.00	66.00	76.00
Weight Per Dozen, Lbs..	19½	30	34	42	47	52
Size Inches	2¾	3	3¼	3½	3¾	4
Per Dozen	\$90.00	105.00	140.00	180.00	210.00	240.00
Weight Per Dozen, Lbs..	56	67	78	89	95	100

NOTE—For sizes under 1¼ inches, use Millwright Auger List on page 25.

Individually wrapped in heavy paper

SNELL SOLID CENTER RAFTING AUGERS



No. 846

Forged from crucible steel, polished head and twist; used chiefly for heavy timber boring; head has two cutters and is of the flat cut type, having side lips.

Length of Twist, 12 Inches—Length Over All, 30 Inches

Size Inches	1¼	1½	1¾	2
Per Dozen	\$32.00	40.00	48.00	56.00
Weight Per Dozen, Lbs..	28¾	30½	32	33¾

Individually wrapped in heavy paper

SNELL SOLID CENTER DERRICK AUGERS



No. 847

Forged in one piece from crucible steel, polished twist; furnished also with lacquered twist; extensively used by oil well derrick builders and for deep boring work; this type of auger is made only in the solid center pattern with double cutter, flat head.

Length of Twist, 18 inches—Length Over All, 36 Inches

Size Inches, in 16ths.	10	11	12	13	14	15	16	17
Per Dozen	\$27.90	30.30	31.80	34.50	36.30	39.00	40.80	43.50
Weight Per Dozen, Lbs..	28½	28¾	29	29¼	29½	29¾	30¼	30½
Size Inches, in 16ths.	18	20	22	24	26	28	30	32
Per Dozen	\$45.30	49.80	55.50	61.20	69.00	76.80	84.60	92.40
Weight Per Dozen, Lbs..	30¾	31½	32½	34½	36	38	40	42

Individually wrapped in heavy paper

JOHN H. GRAHAM & CO. DIRECT REPRESENTATIVES

SNELL TAPPING BITS



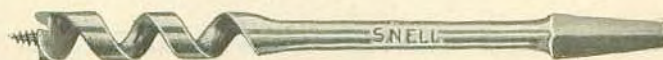
No. 262

Crucible steel, polished finish; double spur; coarse thread; used for tapping maple trees.

Size Inches, in 16ths.....	6	7	8	10
Per Dozen	\$5.00	5.00	5.00	6.00
Length Over All, Inches.....	6	6	6	6
Weight Per Dozen, Lbs.....	1¼	1½	1½	1¾

One dozen in a box

SNELL STAR TAPPING BITS



No. 662

Crucible steel, full polished finish; has single spur and single cutting edge; special form of spiral clears chips readily; unequalled for rapid work.

Size Inches, in 16ths.....	6	7	8	10
Per Dozen	\$5.00	5.00	5.00	6.00
Length Over All, Inches.....	6	6	6	6
Weight Per Dozen, Lbs.....	1	1¼	1½	1¾

One dozen in a box

SNELL COUNTERSINK GIMLET BITS



SCREW POINT, No. 65

Cast steel blade, spoon pattern, screw point; length over all, 4 to 5 inches.

No. 65—Assorted for screws ¾, 1, 1¼, and 1½ inches; weight per dozen, ¾ lb.....	Per Dozen \$2.00
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DIAMOND, No. 66

Forged from cast steel; diamond point and full turn twist; for screws from ¾ to 1¾ inches; length over all, 4 to 5 inches.

Nos.	0	1	2	3	4
Per Dozen	\$2.00	2.00	2.00	2.00	2.00
To Bore, Inches.....	5/32 x 3/4	9/32 x 1	7/32 x 1 1/4	8/32 x 1 1/2	9/32 x 1 3/4
Weight Per Dozen, Lbs.....	¾	¾	1	1	1¼

One dozen in a box

ASSORTMENT

No. 66 A—One dozen assorted sizes for screws ¾ to 1¾ inches; weight per dozen, 1 lb.....	Per Dozen \$2.00
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One dozen in a box

SNELL EXTENSION LIP DOWEL BITS



No. 360

Forged from crucible steel; full polished, except nib.

Used by furniture makers, manual training schools and for boring where space is limited.

Length of Twist, 2 1/4 Inches—Length Over All, 4 1/2 Inches

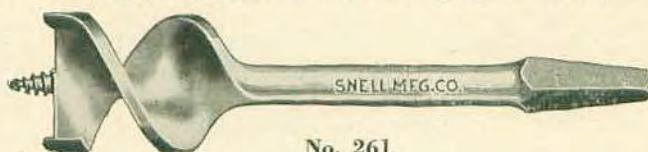
Size Inches, in 16ths...	3	4	5	6	7
Per Dozen	\$6.00	5.00	5.00	5.00	5.00
Weight Per Dozen, Lbs...	3/4	7/8	1	1	1 1/8
Size Inches, in 16ths...	8	9	10	11	12
Per Dozen	\$5.00	6.00	6.00	7.00	7.00
Weight Per Dozen, Lbs...	1 1/8	1 1/2	1 1/8	1 3/8	1 3/8

One dozen in a box

SNELL SOLID CENTER DOWEL BITS, No. 860

Will be furnished on order—List Prices same as above.

SNELL DOUBLE SPUR PLUG BITS



No. 261

Forged from crucible steel; full polished, except nib.

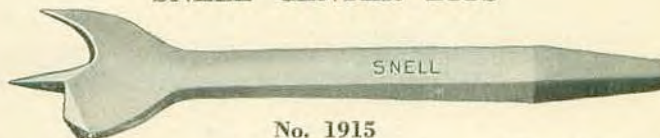
Used by furniture makers, boat builders and others; has double spur and coarse thread screw.

Length of Twist, 1 to 2 Inches—Length Over All, 6 1/2 Inches

Size Inches, in 16ths...	12	13	14	15	16
Per Dozen	\$7.00	8.25	8.25	9.50	9.50
Weight Per Dozen, Lbs...	2	2 1/4	2 1/2	2 3/4	2 3/4
Size Inches, in 16ths...	17	18	20	22	24
Per Dozen	\$12.00	12.00	14.00	16.00	18.00
Weight Per Dozen, Lbs...	3	3 1/2	4	5 1/4	5 1/2

Half dozen in a box

SNELL CENTER BITS



No. 1915

Forged from cast steel, bright finish; used by stair builders and for shallow boring.

Length Over All, 4 to 5 1/2 Inches

Size Inches	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1
Per Dozen	\$3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Weight Per Dozen.....	1	1 1/4	1 1/2	1 3/4	2	2 1/2	3	3 1/2
Size Inches	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4	1 7/8	2
Per Dozen	\$4.00	4.80	5.60	6.40	7.60	8.40	9.20	10.00
Weight Per Dozen, Lbs...	3 3/8	4 1/4	4 1/2	5	5 1/2	5 3/4	6	6 1/2

ASSORTMENT

No. 1915 A—Assortment, contains one dozen bits; three bits 1/2 inch, two bits 5/8 inch, and one bit each, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 3/8 and 1 1/2 inches.....Per Assortment, \$4.40

One dozen in a box

JOHN H. GRAHAM & CO. DIRECT REPRESENTATIVES

SNELL GIMLET BITS



CONTINENTAL PATTERN, No. 72

Cast Steel, Tempered Straw Color, Cobra Point

Size Inches, in 32ds....	2	3	4	5	6	7
Per Dozen	\$2.00	2.20	2.20	2.20	2.20	2.20
Length, Inches	4	4	4½	5	5	5½
Weight Per Dozen, Lbs..	½	½	⅝	⅝	¾	¾
Size Inches, in 32ds....	8	9	10	11	12	
Per Dozen	\$2.20	2.50	2.50	3.00	3.00	
Length, Inches	5¼	6	6¼	6¼	6¾	
Weight Per Dozen, Lbs..	⅞	1	1¼	1¾	1½	

ASSORTMENT

No. 72 A—Assortment, contains one dozen bits, assorted sizes, 4 to 8-32ds; weight per assortment, ¾ lb.,

Per Assortment, \$2.20

One dozen in a box



DOUBLE CUT, No. 73

Forged from cast steel, oil tempered and polished.

Nos.	0	1	2	3	4	5	6
Per Dozen	\$2.00	2.00	2.20	2.50	2.75	3.00	3.25
Size Inches, in 32ds....	4	5	6	7	8	9	10
Length, Inches	4½	4½	4½	4½	4¾	4¾	6
Weight Per Dozen, Lbs..	½	⅝	¾	⅞	1	1½	1¼

ASSORTMENT

No. 73 A—Assortment, contains one dozen bits, assorted sizes 4 to 10-32ds; weight per assortment, ⅞ lb.,

Per Assortment, \$3.25

One dozen in a box

SNELL ELECTRICIANS' GIMLET BITS



No. 75

Drawn from refined steel, bright finish.

Diameter in 32ds....	6	7	8	9	10	11	12
12 Inches Long, Per Doz.	\$5.00	5.00	5.00	5.00	5.00	5.00	5.00
15 Inches Long, Per Doz.	6.00	6.00	6.00	6.00	6.00	6.00	6.00
18 Inches Long, Per Doz.	7.00	7.00	7.00	7.00	7.00	7.00	7.00
24 Inches Long, Per Doz.	9.00	9.00	9.00	9.00	9.00	9.00	9.00
30 Inches Long, Per Doz.	12.00	12.00	12.00	12.00	12.00	12.00	12.00

NOTE—Specify length and diameter when ordering.

One dozen in a box

SNELL ELECTRICIANS' GIMLETS



No. 85

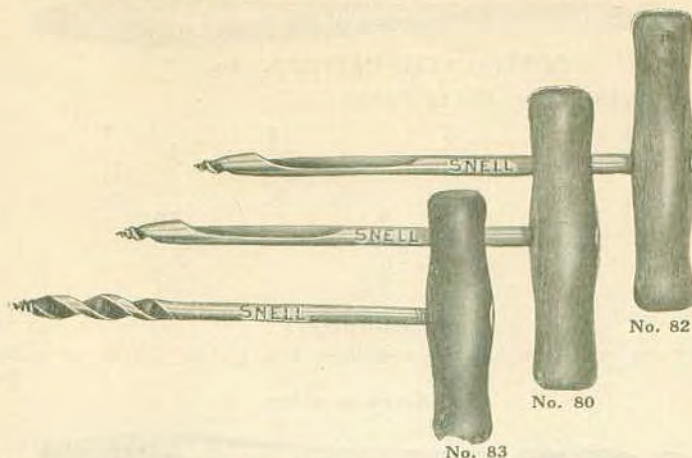
For bell hangers, telephone and telegraph workers; gimlets have hardwood handles.

Diameter in 32ds....	6	7	8	9	10	11	12
15 Inches Long, Per Doz.	\$6.00	6.00	6.00	6.00	6.00	6.00	6.00
18 Inches Long, Per Doz.	7.00	7.00	7.00	7.00	7.00	7.00	7.00
24 Inches Long, Per Doz.	9.00	9.00	9.00	9.00	9.00	9.00	9.00
30 Inches Long, Per Doz.	12.00	12.00	12.00	12.00	12.00	12.00	12.00
36 Inches Long, Per Doz.	15.00	15.00	15.00	15.00	15.00	15.00	15.00

NOTE—Specify length and diameter when ordering.

One dozen in a box

SNELL CONTINENTAL PATTERN GIMLETS



- No. 80**—SCREW POINT, cast steel blade, hand filed screw point; turned hardwood handle; blade extends through handle and is riveted at end; length over all, 5 inches; assorted sizes 4 to 8-32ds; weight per gross, $7\frac{1}{2}$ lbs.Per Gross, \$12.00
- No. 82**—COBRA POINT, cast steel blade; turned hardwood handle; blade extends through handle and is riveted at end; length over all, 5 inches; assorted sizes 4 to 8-32ds; weight per gross, $7\frac{1}{2}$ lbs.,
Per Gross, \$12.00
- No. 83**—DOUBLE CUT, POLISHED, cast steel blade; turned hardwood handle; blade extends through handle and is riveted at end; length over all 5 inches; assorted sizes 4 to 8-32ds; weight per gross, 9 lbs.,
Per Gross, \$12.00

All the above, one dozen in a box

SNELL COUNTERSINKS

Forged from cast steel, polished finish.



No. 67

- No. 67**—FLAT COUNTERSINKS, for metal, countersinks to $\frac{5}{8}$ inch; length over all, $4\frac{1}{4}$ inches; weight per dozen, $1\frac{1}{8}$ lbs.Per Dozen, \$2.50



No. 68

- No. 68**—ROSE COUNTERSINKS, for metal, countersinks to $\frac{5}{8}$ inch; length over all, $4\frac{1}{4}$ inches; weight per dozen, $1\frac{1}{4}$ lbs.Per Dozen, \$2.75



No. 69

- No. 69**—SNAIL COUNTERSINKS, for wood, countersinks to $\frac{5}{8}$ inch; length over all, $4\frac{1}{4}$ inches; weight per dozen, $1\frac{1}{2}$ lbs.Per Dozen, \$2.50

All the above, one dozen in a box

SNELL SCREW DRIVER BITS



No. 77

No. 77—Forged from tool steel, full polished, with ground ends; assorted width blades, $\frac{3}{8}$, $\frac{7}{8}$ and $\frac{1}{2}$ inch; length over all, $4\frac{1}{2}$ inches; weight per dozen, $1\frac{1}{8}$ lbs.Per Dozen, \$2.00



No. 78

No. 78—Cast steel, polished blades; assorted width blades, $\frac{1}{8}$ to $\frac{5}{8}$ inch; length over all, $4\frac{1}{2}$ inches; weight per dozen, $1\frac{1}{4}$ lbs.Per Dozen, \$1.50



No. 79

No. 79—DOUBLE END, cast steel, polished blades; length over all, $4\frac{1}{2}$ inches; $\frac{1}{4}$ inch blade on one end, $\frac{5}{8}$ inch on other end; weight per dozen, $1\frac{1}{2}$ lbs.Per Dozen, \$3.00

All the above, One Dozen in a Box

SNELL ROUND PUNCHES



"BLACK JACK" No. 37

Polished head and bevel; natural finish octagon body; hardened tool steel, will withstand severest usage as metal or machine punch; hollow tapered for removing section rivets.

Length over all, inches.....	8	9	10
Per dozen	\$4.00	4.00	4.00
Diameter of body, inches.....	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$
Diameter of point, inches.....	$\frac{1}{8}$	$\frac{7}{8}$	$\frac{1}{4}$
Weight per dozen, lbs.....	5	8	$12\frac{1}{4}$

Half Dozen in a Box

SNELL ROOFING PUNCHES



No. 38

No. 38—Polished head and taper, natural finish octagon body, hardened tool steel, length over all, $7\frac{1}{2}$ inches; weight per dozen, $3\frac{1}{2}$ lbs.Per Dozen, \$4.00

One Dozen in a Box

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